

Notice of Allowability**Application No.**

10/092,999

Applicant(s)

ZHOU ET AL.

Examiner

Minerva Rivero

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/07/2002.
2. ☒ The allowed claim(s) is/are 1-8, 10-23 and 25-41.
3. ☒ The drawings filed on 03/07/2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>3/07/2002</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kasey Christie on April 19, 2005.

The application has been amended as follows:

Duplicate claims 9 and 24 have been cancelled.

In claim 10, the term *affect* as recited in "a third code segment to affect bit-plane coding the quantized data into an embedded audio bitstream of bit planes" has been changed to *effect*.

Allowable Subject Matter

2. Claims 1-8, 10-23 and 25-41 are allowed.

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3. Regarding claims 1, 5, 10, 14, 19, 25, 32, and 36-37, Li *et al.* (US Patent 6,580,834) disclose a coding apparatus and method comprising:

a signal processor for signal-processing input audio signals (Col. 3, Lines 9-12);

a quantizer for quantizing the signal processed input audio signals into quantized subbands (Col. 2, Lines 13-14); and

an encoder for bit-plane coding the quantized data into an embedded audio bitstream of bit-planes (Col. 2, Lines 17-18).

However, Li *et al.* do not disclose each said bit-plane has a data unit that includes:

a beginning partition having one or more contiguous refinements bits;

a second partition having one or more contiguous coded significance bits;

a third partition having one or more contiguous sign boundary mark bits;

a fourth partition having one or more contiguous coded sign bits;

the third partition is between the second and fourth partitions.

4. Regarding claim 30, Li *et al.* disclose a data structure having two partitions (*bit plane is divided into two segments*, Col. 7, Lines 48-52).

However, Li *et al.* do not disclose a data structure for a coded bit-plane of an embedded audio bitstream that includes binary data having bits, the data structure comprising:

a beginning partition having one or more contiguous refinement bits;

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a second partition having one or more contiguous coded significance bits;
a third partition having one or more contiguous sign boundary mark bits; and
a fourth partition having one or more contiguous coded sign bits, wherein the third partition is between the second and fourth partitions.

5. Claims 2-4, 6-8, 11-13, 15-18, 20-23, 26-29, 31, 33-35 and 38-41 are allowed because they further limit their parent claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Radha *et al.* disclose a variable bit plane coding method, where bit plane partitioning is performed according to desired scalability and coding efficiency.

Zhang *et al.* disclose a coding method wherein quality varies according to the quantity of enhancement layers that are ultimately decoded.

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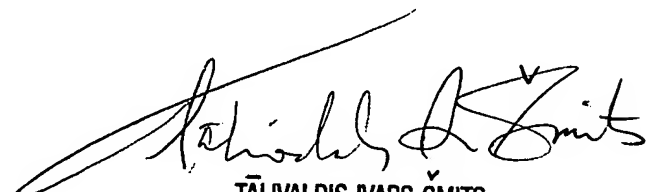
7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minerva Rivero whose telephone number is (571) 272-7573. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Ivars Smits can be reached on (571) 272-7628. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MR 4/21/2005



TĀLIVALDIS IVARS SMITS
PRIMARY EXAMINER